

AMENDMENT UNDER 37 C.F.R. § 1.116
U.S. APPLN. NO.: 09/735,892

REMARKS

Claims 2 and 5 are pending in the present application. As will be discussed below, claims 2 and 5 have been amended and claim 1 has been cancelled. No new matter has been added. According, entry of the present amendment is requested. Applicants respectfully submit that entry of the present amendment is appropriate, despite the finality of the Office Action dated October 23, 2002, because the present amendment is believed to place the application in condition for allowance.

Claims 1, 2 and 5 have been rejected under 35 U.S.C. § 112, second paragraph, as assertedly being indefinite.

Specifically, claim 1 is criticized as being confusing "since the claim appears to be unclear as to just what particular type of 'molecular weight' is being referred to in line 3 of claim 1." Additionally, it is indicated that "claim 1 now contains the term 'comprising' in three places in the first three lines of the claim and at times it appears that two of them may refer to the same ingredient, and as such are also believed to create confusion and apparent ambiguity in the claims."

Applicants respectfully traverse this rejection for the following reasons.

With respect to the Examiner's first criticism, Applicants respectfully submit that molecular weight of the low-molecular components should simply be defined as a "molecular weight", as presently recited. The reason therefor is set out below.

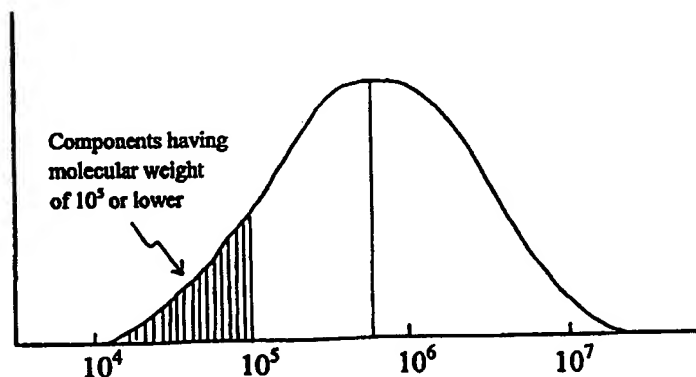
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A molecular weight is a measure showing a size of a molecule, and in the case of a specific molecule, its molecular weight is unequivocally determined (for example, methanol: 32, ethanol: 46, etc.).

On the other hand, a polymer is an aggregate of molecules having different degrees of polymerization, and is constituted of molecules having various molecular weights. Therefore, a molecular weight of a polymer having a specific degree of polymerization can clearly be expressed, but to express a molecular weight of a polymer as a whole, an average value of those molecular weights is employed, and a "weight average" molecular weight is one expression for an average value.

The meaning intended in, for example, Claim 1 of the present application is the amount of polymer molecules having a molecular weight of 10^5 or lower present with respect to the entire polymer (see GPC chart below). In other words, the molecular weight of 10^5 is a molecular weight of the individual polymer.

GPC chart: In the case of weight average molecular weight= 10^6 .



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Thus, molecular weight of the low-molecular components should simply be defined as "molecular weight", as presently recited.

With respect to the Examiner's second criticism, the adhesive sheet of the present claimed invention "comprises" a pressure-adhesive layer which itself "comprises" a pressure-sensitive adhesive. Applicants respectfully submit that this transitional phrase indicates that the adhesive sheet may include other components other than the pressure-adhesive layer and the pressure sensitive adhesive may contain components other than the polymer. Applicants respectfully submit that this language is not ambiguous to one of ordinary skill in the art.

In view of the foregoing, Applicants respectfully submit that claim 5 which includes the text of claim 1 complies with the requirements of 35 U.S.C. § 112 second paragraph. Accordingly, withdrawal of the rejection is requested.

Claim 1 has been rejected under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over EP '470. Additionally, claims 2 and 5 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over EP '470.

First, Applicants note that as mentioned above, claim 1 has been cancelled. Accordingly, the rejection of claim 1 has been rendered moot.

Applicants respectfully traverse the rejection of claims 2 and 5 for the following reasons.

In accordance with the present claimed invention, the removable pressure-sensitive adhesive sheet is used for processing a semiconductor wafer. Therefore, the characteristics that are required in such a sheet include an appropriate peel force and the pressure-sensitive adhesive

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of the sheet not being retained during the subsequent wiring step, as described in the paragraph bridging pages 1 and 2 of the present specification.

In order to achieve the desired characteristics of the removable pressure-sensitive adhesive sheet, the present inventors have determined that the content of low-molecular components having a molecular weight of 10^5 or less in the polymer should be 10% by weight or lower. Applicants respectfully submit that EP '470 does not teach or suggest the present claimed invention, as defined by claim 5. Accordingly, withdrawal of this rejection is requested.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Claim 1 is canceled without prejudice or disclaimer.

Claims 2 and 5 are amended as follows:

2. (Amended) The method of claim 5, [removable pressure-sensitive adhesive sheet of claim 1,] wherein the polymer constituting the pressure-sensitive adhesive is an acrylic polymer obtained by polymerizing one or more monomers in liquid or supercritical carbon dioxide.

5. (Amended) A semiconductor wafer processing method, comprising adhering [the] a removable pressure-sensitive adhesive sheet [of claim 1] which comprises a pressure-sensitive adhesive layer comprising a pressure-sensitive adhesive comprising a polymer in which the content of low-molecular components having a molecular weight of 10^5 or lower is 10% by weight or lower, and the polymer has a weight average molecular weight of 930,000 to 2,100,000, to a front or back surface of the wafer, and processing the wafer.